

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-3. (Canceled)

4. (Original) A modified tuber, comprising a level of acrylamide that is at least about 99%, 98%, 97%, 96%, 95%, 94%, 93%, 92%, 91%, 90%, 89%, 88%, 87%, 86%, 85%, 84%, 84%, 83%, 82%, 81%, 80%, 79%, 78%, 77%, 76%, 75%, 74%, 73%, 72%, 71%, 70%, 69%, 68%, 67%, 66%, 65%, 64%, 63%, 62%, 61%, 60%, 59%, 58%, 57%, 56%, 55%, 54%, 53%, 52%, 51%, 50%, 49%, 48%, 47%, 46%, 45%, 44%, 43%, 42%, 41%, 40%, 39%, 38%, 37%, 36%, 35%, 34%, 33%, 32%, 31%, 30%, 29%, 28%, 27%, 26%, 25%, 24%, 23%, 22%, 21%, 20%, 19%, 18%, 17%, 16%, 15%, 14%, 13%, 12%, 11%, 10%, 9%, 8%, 7%, 6%, 5%, 4%, 3%, 2%, or 1% lower than the level of acrylamide normally associated with a wild-type tuber of the same species as the species of the modified tuber.

5. (Original) The modified tuber of claim 4, wherein the modified tuber is a mature tuber.

6. (Original) The modified tuber of claim 4, wherein the modified tuber is at least 12-weeks old.

7. (Original) The modified tuber of claim 4, wherein the tuber is selected from the group consisting of ahipa, apio, arracacha, arrowhead, arrowroot, baddo, bitter casava, Brazilian arrowroot, cassava, Chinese artichoke, Chinese water chestnut, coco, cocoyam, dasheen, eddo, elephant's ear, girasole, goo, Japanese artichoke, Japanese potato, Jerusalem artichoke, jicama, lilly root, ling gaw, mandioca, manioc, Mexican potato, Mexican yam bean, old cocoyam, potato, saa got, sato-imo, seegoo, sunchoke, sunroot, sweet casava, sweet potatoes, tanier, tannia, tannier, tapioca root, topinambour, water lily root, yam bean, yam, and yautia.

8. (Original) The modified tuber of claim 7, wherein the potato is a Russet potato, a Round White potato, a Long White potato, a Round Red potato, a Yellow Flesh potato, or a Blue and Purple potato.

9-12. (Canceled)

13. (Original) A modified tuber comprising a level of cold-induced glucose that is at least about 99%, 98%, 97%, 96%, 95%, 94%, 93%, 92%, 91%, 90%, 89%, 88%, 87%, 86%, 85%, 84%, 83%, 82%, 81%, 80%, 79%, 78%, 77%, 76%, 75%, 74%, 73%, 72%, 71%, 70%, 69%, 68%, 67%, 66%, 65%, 64%, 63%, 62%, 61%, 60%, 59%, 58%, 57%, 56%, 55%, 54%, 53%, 52%, 51%, 50%, 49%, 48%, 47%, 46%, 45%, 44%, 43%, 42%, 41%, 40%, 39%, 38%, 37%, 36%, 35%, 34%, 33%, 32%, 31%, 30%, 29%, 28%, 27%, 26%, 25%, 24%, 23%, 22%, 21%, 20%, 19%, 18%, 17%, 16%, 15%, 14%, 13%, 12%, 11%, 10%, 9%, 8%, 7%, 6%, 5%, 4%, 3%, 2%, or 1% lower than the level of glucose in a wild-type tuber of the same species as said modified tuber.

14. (Original) The modified tuber of claim 13, wherein the level of glucose in the modified tuber is about 40% lower than the level of glucose in the wild-type tuber of the same species.

15. (Original) A modified, mature tuber comprising a 5-fold reduction in acrylamide levels compared to the level of acrylamide in a wild-type tuber of the same species.

16. (Original) The modified tuber of claim 13, wherein the modified tuber is a mature tuber.

17. (Original) The modified tuber of claim 13, wherein the modified tuber is at least 12-weeks old.

18-43. (Canceled)

44. (New) The modified tuber of claim 4, wherein the tuber is obtained from a plant grown from a plant cell that has been transformed with an Agrobacterium with a desired

polynucleotide, wherein the desired polynucleotide is flanked by at least one sequence of (a) 25 nucleotides in length that (b) promotes and facilitates integration of the desired polynucleotide into the plant genome and which (c) is not 100% identical to a T-DNA border, and wherein (d) the 25 nucleotide-long sequence comprises a plant DNA sequence that comprises the consensus nucleotide sequence of SEQ ID NO:93 (ANGATNTATN.sub.6GT), where "N" is an A, G, C, or T nucleotide; and (2) growing a plant from said transformed plant cell, which comprises in its genome the desired polynucleotide.

45. (New) The modified tuber of claim 4, wherein the expression of the R1 gene is downregulated in the tuber.

46. (New) The modified tuber of claim 44, wherein the desired polynucleotide comprises a sequence complementary to at least part of a potato R1 gene.

47. (New) The modified tuber of claim 13, wherein the expression of the R1 gene is downregulated in the tuber.